

WHAT IS CLAIMED IS:**1. A drill sharpener comprising:**

a housing;

a grinding wheel assembly;

a sharpening port adapted to receive a chuck holding a drill to be sharpened; and

a point-splitting port, comprising

a generally circular opening and a generally cylindrical wall extending inwardly from said housing toward said grinding wheel assembly,

at least one protrusion extending radially inwardly from said generally cylindrical wall, said protrusion being adapted to cooperate with a complementary-shaped recess on a cylindrical wall of a barrel of a chuck, thereby requiring said chuck to be inserted in a predetermined orientation in order to present the drill held in said chuck in a predetermined orientation relative to said grinding wheel assembly;

said at least one protrusion being operable to preclude movement of a chuck and drill past a predetermined stop point in said point-splitting port; and

wherein said point-splitting port is positioned relative to said grinding wheel assembly such that a flute of a drill held by said chuck will, upon insertion of said chuck and drill into said point-splitting port, come into contact with a grinding surface of said grinding wheel assembly as said chuck and drill are moved in said port toward said grinding wheel assembly.

2. A drill sharpener as recited in Claim 1, wherein said point splitting port has an opening slightly larger than a barrel of a chuck to be inserted therein, and further has a

centering device to aid in centering said barrel of said chuck as it is inserted into said port.

3. A drill sharpener as recited in Claim 2, wherein said centering device comprises a resilient portion of said generally cylindrical wall and a flange protruding radially inwardly from said resilient portion of said wall.

4. A drill sharpener as recited in Claim 3, wherein said resilient portion of said wall comprises a tongue element formed in said wall and attached to said wall at one end thereof.

5. A drill sharpener as recited in Claim 1, wherein said point-splitting port further comprises at least two protrusions extending radially inwardly from said generally cylindrical wall, at substantially diametrically opposed positions.

6. A drill sharpener as recited in Claim 5, wherein said at least two protrusions are so constructed and arranged to form two substantially parallel surfaces to be presented to a chuck barrel being inserted.

7. A drill sharpener comprising:

a housing;

a grinding wheel assembly;

a chuck assembly adapted to securely retain a drill to be sharpened therein;

a sharpening port adapted to receive said chuck and adapted to direct said chuck and a drill toward said grinding wheel assembly to sharpen in point of said drill; and

a point-splitting port, comprising

a generally circular opening and a generally cylindrical wall extending inwardly from said housing toward said grinding wheel assembly,

at least one protrusion extending radially inwardly from said generally cylindrical wall, said protrusion being adapted to cooperate with a complementary-shaped recess on a cylindrical wall of a barrel of said chuck, thereby requiring said chuck to be inserted in a predetermined orientation in order to present the drill held in said chuck in a predetermined orientation relative to said grinding wheel assembly;

said at least one protrusion being operable to preclude movement of said chuck and drill past a predetermined stop point in said point-splitting port; and

wherein said point-splitting port is positioned relative to said grinding wheel assembly such that a flute of a drill held by said chuck will, upon insertion of said chuck and drill into said point-splitting port, come into contact with a grinding surface of said grinding wheel assembly as said chuck and drill are moved in said port toward said grinding wheel assembly.

8. A drill sharpener as recited in Claim 7, wherein said point splitting port has an opening slightly larger than a barrel of said chuck to be inserted therein, and further has a centering device to aid in centering said barrel of said chuck as it is inserted into said port.

9. A drill sharpener as recited in Claim 8, wherein said centering device comprises a resilient portion of said generally cylindrical wall and a flange protruding radially inwardly from said resilient portion of said wall.

10. A drill sharpener as recited in Claim 9, wherein said resilient portion of said wall comprises a tongue element formed in said wall and attached to said wall at one end thereof.

11. A drill sharpener as recited in Claim 7, wherein said point-splitting port further comprises at least two protrusions extending radially inwardly from said generally cylindrical wall, at substantially diametrically opposed positions.

12. A drill sharpener as recited in Claim 11, wherein said at least two protrusions are so constructed and arranged to form two substantially parallel surfaces to be presented to a barrel of said chuck as said chuck is inserted therein.

13. A drill sharpener comprising:

a housing;

a grinding wheel assembly;

at least two ports through which a chuck holding a drill may be inserted in a direction toward said grinding wheel assembly; and

a debris collection tube so constructed and arranged to be inserted into at least one of said at least two ports, and forming a seal with said port sufficient to substantially preclude debris from exiting between said tube and a wall of said port,

said debris collection tube further being so constructed and arranged to confine debris entering into said tube.

14. A drill sharpener as defined in Claim 13, wherein said debris collection tube has a cap secured thereto at an end opposite an end that is to be inserted into said port.

15. A drill sharpener as defined in Claim 14, wherein said cap is vented to permit gas to flow therethrough when installed on said tube, while substantially preventing solid particles from exiting said cap.

16. A drill sharpener as defined in Claim 14, wherein said cap is removable from said tube.

17. A drill sharpener as defined in Claim 13, wherein said debris collection tube has an end opposite an end to be inserted into said port that is adapted to be connected to a vacuum hose.

18. A drill sharpener as defined in Claim 13, wherein said grit collection tube is so constructed and arranged to form an elbow, and wherein said tube is capable of being

inserted into at least one of said ports in a manner such that a portion of said tube which is not inserted into said port is canted downwardly.